

**GOVERNMENT OF INDIA
DEPARTMENT OF SPACE
ISRO PROPULSION COMPLEX (IPRC)
MAHENDRAGIRI**

Tender for SMART Pressure Transmitters

Bids to be submitted online

Tender No.: IPRC/PURGP3/IP202400122801 dated 31-10-2024

A. Tender Details

Tender No : **IPRC/PURGP3/IP202400122801**

Tender Date : **31-10-2024**

Tender Classification: **GOODS**

Purchase Entity : **PURGP3**

Centre : **ISRO PROPULSION COMPLEX (IPRC)**

SMART Pressure Transmitters

IMPORTANT NOTE: This is a Two-Part tender i.e. Techno-Commercial Part Containing C.1 (Technical Bid), Supporting Documents required from Vendor, C.2 (Commercial Terms / Bid) and C3. Price Bid. Please note that all technical commercial details without price shall be furnished in the Documents Solicited from Vendor & in Commercial Compliance C.2 (Commercial Terms / Bid) Fields while price shall be indicated only in the C3. Price Bid form of bid submission in E-procurement portal. PRICE SHALL BE MENTIONED ONLY IN THE E_PROCUREMENT PRICE BID FORM. [ENSURE NOT TO MENTION ANY PRICE ANYWHERE ELSE, OTHERWISE THE QUOTE WILL BE INVALID. PLEASE NOTE BEFORE/WHILE SUBMITTING YOUR OFFERS].

For any clarifications regarding this tender, your query should be sent to psogroup3@iprc.gov.in Ph:04637-281554 clearly mentioning the tender number, within the time period specified in the tender.

PLEASE NOTE THE FOLLOWING WHILE SUBMITTING YOUR OFFER:-

X-----X

- 1). Last minute clarification on tenders will not be entertained.
- 2). This is an E Tender. Hence Postal/Fax/Email tenders will not be accepted. Offer shall be submitted through our E-procurement portal.
- 3). Before submission of bid, the bidder should study all the terms and conditions mentioned in the tender document along with the files attached with the tender.
- 4). MSE Purchase preference is will be given to MSEs who is registered under Udyam Registration and on production of Udyam Registration Certificate. MSE Purchase preference will not be applicable to Retail and Wholesale traders.
- 5). Read the clauses regarding Make In India-Purchase Preference Policy, which is mentioned in the Tender Documents. Give the necessary compliance in the relevant field in the Vendor Specified Terms.
- 6). Foreign vendors/Non-Local Supplier are not permitted to quote.

- 7). Only Class-I and Class-II Local suppliers as per Make in India Policy are eligible to participate in the bid.
- 8). Quotations directly from foreign OEM/ or from agents quoting on behalf of foreign OEMs are not allowed to participate in this tender. Quotation submitted shall be in Indian Rupees Only.
- 9). The percentage of local content should be specifically mentioned in your offer as per the Make In India Local Content declaration format, as provided in the tender document without which your offer will be summarily rejected.
- 10). Preference will be given to Class-I Local Supplier. No Purchase preference will be applicable for Class-II Local Supplier.

A.1 Tender Schedule

Bid Submission Start Date :	31-10-2024 17:45
Bid Clarification Due Date :	14-11-2024 14:00
Bid Submission Due Date :	28-11-2024 14:00
Bid Opening Date :	28-11-2024 14:01
Price Bid Opening Date :	10-12-2024 14:00

B. Tender Attachments

Technical Write-up/Drawings

Document : General terms & conditions

Document : Annexure-A

Instructions To Vendors

3. Important Notice:-Tenders (only Technical Bid) will be opened on the date [Bid Opening Date] specified above. The date of opening of the Price Bid mentioned is indicative only. Price bids of Qualified Vendors will be opened after completing the technical evaluation process. Bidding details can be seen by the participated vendors by logging into ISRO e-procurement portal.

4. General Instructions

1. Last minute clarification on tenders will not be entertained.
2. This is an E Tender. Hence Postal/Fax/Email tenders will not be accepted.
3. If a vendor is not able to submit bid against this tender due to any reason, such vendor is requested to post their REGRET message in the e-procurement portal with clear reasons or email to psogroup3@iprc.gov.in. Non submission of bids without regrets will be viewed seriously.
4. IPRC reserves the right to split the tendered quantity in part or whole on its sole discretion without assigning any reason.
5. IPRC has the right to cancel the tender without assigning any reason etc.
6. If any vendor submits forged / false documents along with the tender, offer of such vendors will be summarily rejected and such bidders will be blacklisted for all future tenders.
7. Option Clause:-The purchaser reserves the right to increase/decrease the ordered quantity by up to 25-30 percent at any time, till final delivery date (or the extended delivery date of the contract), by giving reasonable notice even though the quantity ordered initially has been supplied in full before the last date of the delivery period (or the extended delivery period)
8. In cases where the manufacturer has submitted the bid, the bids of its authorised dealer will not be considered.

9. Conflict of Interest among Bidders/ Agents:-

The bidder/s who found to have a conflict of interest shall be disqualified from the tendering process. A bidder may be considered to have a conflict of interest with one or more parties in this bidding process, if:

- (a). they have controlling partner (s) in common; or
- (b). they receive or have received any direct or indirect subsidy/ financial stake from any of them; or
- (c). they have the same legal representative/agent for purposes of this bid; or
- (d). they have relationship with each other, directly or through common third parties, that puts them in a position to have access to information about or influence on the bid of another Bidder; or
- (e). Bidder participates in more than one bid in this bidding process. Participation by a Bidder in more than one Bid will result in the disqualification of all bids in which the parties are involved. However, this does not limit the inclusion of the components/ sub-assembly/ Assemblies from one bidding manufacturer in more than one bid.
- (f). In cases of agents quoting in offshore procurements, on behalf of their principal manufacturers, one agent cannot represent two manufacturers or quote on their behalf in a particular tender enquiry. One manufacturer can also authorise only one agent/dealer. There can be only one bid from the following:
 - (i). The principal manufacturer directly or through one Indian agent on his behalf; and
 - (ii). Indian/foreign agent on behalf of only one principal.
- (g). In case of a holding company having more than one independently manufacturing units, or more than one unit having common business ownership/management, only one unit should quote. Similar restrictions would apply to closely related sister companies. Bidders must proactively declare such sister/ common business/ management units in same/ similar line of business.

5. Concessional GST :-

1. We are eligible for GST @5% as per the following notifications:-

- (a). IGST:- Ministry of Finance, Dept. of Revenue Notification No. 25/2018 Integrated Tax (Rate) Schedule-I; SI.No.243B dated 31.12.2018 (Amendment to Notification No. 7/2018 - Integrated Tax (Rate) dated 25.01.2018 and Notification No. 1/2017 - Integrated Tax (Rate) dated 28.06.2017
- (b). CGST:-Ministry of Finance, Dept. of Revenue Notification No. 24/2018 Central Tax (Rate) Schedule-I; SI. No. 243B dated 31.12.2018 (Amendment to Notification No. 6/2018 - Central Tax (Rate) dated 25.01.2018 and Notification No. 1/2017 - Central Tax (Rate) dated 28.06.2017
- (c). SGST:-Government of TamilNadu, Commercial Taxes & Registration (B1) Department G.O(Ms) No.18 Dtd. 25/01/2018 & Schedule-I; SI. No. 243 B as per the amendment dated 31.12.2018 (Amendment G.O(Ms)No.170 dated 31/12/2018).

Necessary Concessional GST certificate will be provided along with the P.O.

Please note this and submit your quote accordingly.

6. [GENERAL TERMS AND CONDITIONS]

1. (I) GST where legally leviable and intended to be claimed should be distinctly shown separately in

the tender.

2. (II) a) Facility of after sales service to be confirmed with details. b) Permanent Account Number (PAN) allotted by Income-Tax authorities shall be furnished with documentary proof. Otherwise, documentary proof for having applied for PAN should be provided. Also PAN should be in the name of Company/Firm, if quoted by the Company/Firm and in the name of Individual, if quoted by individual. c) GST No. d) PAN No. e) Local office in Tirunelveli / Nagercoil is preferable. Note: (b) to (e) are applicable for Indian Companies only.

3. (III) Our standard delivery term is FOR, IPRC. In case any vendor offers delivery term of Ex-works, Packing and Forwarding charges if any should be indicated separately in Your quotation/E-procurement Price Bid. In case of imported items (stores), Ex-Works/FOB/FCA prices should be indicated.

4. (IV) PAYMENT: Our standard payment term is 100% within 30 days after receipt and acceptance of the items at our site (after installation and commissioning in cases where installation and commissioning is required)-for Indigenous supply.

5. (V) Guarantee / Warranty period as applicable shall be indicated, along with the quote. Guarantee/Warranty shall commence from the date of installation and acceptance of the complete equipment supplied under the contract/purchase order.

6. (VI) LIQUIDATED DAMAGES: Delivery is the essence of the contract. Items shall be delivered within stipulated period. If delivery is delayed beyond the stipulated delivery period mentioned in the purchase order or any extension thereof, an amount equal to 0.5% per week shall be recovered, subject to a maximum of 10% of the order value shall be deducted from your bills due. For Staggered supply, maximum of 10% of value respective staggered supply lot.

7. (VII) PERFORMANCE BANK GUARANTEE : (If Warranty is applicable/sought in our Tender enquiry). In order to ensure due performance of warranty obligation, Vendor shall submit a Performance Bank Guarantee (PBG) equivalent to 3% of the order value. The PBG can be submitted by way of Bank Guarantee (as per format enclosed on Rs. 200/- stamp paper) from any Nationalized/Scheduled Bank in favor of Accounts Officer, IPRC. The Bank Guarantee should be valid for 60 days beyond the scheduled warranty period. In case the warranty period is extended due to any reasons, the validity of the Bank Guarantee shall also be extended suitably. PBG can be submitted by way of Fixed Deposit Receipt (lien marked to Accounts Officer, IPRC)/Demand Draft in favor of Accounts Officer, IPRC also. The PBG will be forfeited in case of non-performance of warranty obligation.

8. (VIII) SECURITY DEPOSIT : Wherever the offer price is Rs. 5.00 Lakhs or above, To ensure due execution of the Purchase Order, Vendor shall submit an interest free Security Deposit equivalent to

3% of the order value within 15 days from the date of receipt of Purchase Order. Security Deposit can be submitted by way of Bank Guarantee (as per format enclosed on Rs. 200/- stamp paper) from any Nationalized/ Scheduled Bank in favor of Accounts Officer, IPRC. The Bank Guarantee should be valid for 60 days beyond the scheduled delivery date. Security Deposit can be submitted by way of Fixed Deposit Receipt (lien marked to Accounts Officer, IPRC)/Demand Draft in favor of Accounts Officer, IPRC.

In case of non-execution of the Purchase Order within the stipulated delivery period, IPRC reserves the right to cancel the Purchase Order and forfeit the Security Deposit. However, based on request from the Vendor, in case IPRC agree to extend the delivery period with applicability of Liquidated Damages or otherwise, the validity of the Bank Guarantee should be suitably extended. It may be noted that adjustment of Security Deposit from the progressive payment/final bill is not permitted.

9. Note: SD, LD and PBG clauses are mandatory [which will be indicated in Tenders] and offers of the vendors who have not agreed for the above conditions will be excluded from the procurement process. Micro and Small Vendors are not exempted from the submission of Security Deposit. Only Govt Departments/PSUs/PSEs can submit Indemnity Bond instead of Bank Guarantee towards SD/PBG. In case a Purchase Order requires submission of Security Deposit and Performance Bank Guarantee, Vendor has the option to submit a combined Bank Guarantee for Security Deposit and Performance Bank Guarantee within 15 days from the date of receipt of Purchase Order and valid for 60 days beyond completion of the warranty period/all contractual obligation. In case PBG is submitted by way FDR (lien marked to Accounts Officer, IPRC or Demand Draft (in favor of Accounts Officer, IPRC).

10. (IX) IPRC reserves the right to accept or reject any quotation in full or part thereof by recording the reasons.

11. (X) IPRC shall not be responsible for failure of vendors in submitting bids online caused due to technical reasons at vendor end such as network or power failures, computer failure, internet-browser, mistakes / errors in filling the bids on line by vendor etc.

12. (XI) Last minute request for the extension of the due date w.r.t. any technical issue at Vendors/Suppliers side will not be considered. You may submit your quotation online well in advance instead of waiting till the last date to ensure that Internet problem and network condition does not cause problem.

13. (XII) Offers sent through post, telegram, fax, e-mail, courier will not be considered. Partially completed / incomplete tenders shall not be considered.

14. (XIII) Only authorized dealers/agents or their accredited representatives for original manufacturers have to submit the quotation with documentary evidence.

15. (XIV) The goods or material offered should be strictly as per our specifications. Change(s) in specifications, if any, should be clearly indicated by the supplier in his quotation. The supplier should also indicate make/type No. of the materials or equipment offered. Vague terms such as Best quality, Best Indian, Best Indigenous and Imported make should not be used.
16. (XV) Please upload the Technical Details / Catalogue / Data Sheets (wherever applicable) along with your offer.
17. (XVI) The offer should be valid for a period of minimum 90 days from the date of opening of Tender and 180 Days for PT Two Part (120 Days for Technical Bid and 60 Days for Price Bid from the date of opening).
18. (XVII) If any bidder submits forged / false document along with the tender, offer of such vendors will be summarily rejected and such bidders will be blacklisted for all future tenders.
19. (XVIII) Wherever the tenderer is asked to submit sample for evaluation of tenders, the same shall be submitted along with your quote.
20. (XIX) PO will be placed on technically and commercially suitable lowest offer basis and IPRC reserves the right to split the order on L1 basis. The purchaser shall be under no obligation to accept the lowest or any tender and reserves the right of acceptance of the whole or any part of the tender or portions of the quantity offered and the tenderer shall supply the same at the rates quoted.
21. (XX) Purchase preference to Micro and Small Enterprises (MSEs): Purchase preference will be given to MSEs as defined in Public Procurement Policy for Micro and Small Enterprises (MSEs) Order, 2012 dated 23.03.2012 issued by Ministry of Micro, Small and Medium Enterprises and its subsequent Orders/Notifications issued by concerned Ministry. MSE Purchase preference is will be given to MSEs who is registered under Udyam Registration and on production of Udyam Registration Certificate. MSE Purchase preference will not be applicable to Retail and Wholesale traders. In respect of bid for Services, the bidder must be the Service provider of the offered Service. Relevant documentary evidence along with UDYAM REGISTRATION in this regard shall be uploaded along with the bid in respect of the offered product or service. If L-1 is not an MSE and MSE Seller (s) has/have quoted price within L-1 plus 15% (Selected by Buyer) of margin of purchase preference/price band defined in relevant policy, such Seller shall be given opportunity to match L-1 price and contract will be awarded for 25% (selected by Buyer) percentage of total QUANTITY.
22. (XXI) Purchase / Price preference to Make-in-India Products: Preference shall be given to Class 1 local supplier as defined in public procurement (Preference to Make in India), Order 2017 as amended from time to time and its subsequent Orders/Notifications issued by concerned Nodal Ministry for specific Goods/Products. The minimum local content to qualify as a Class 1 local supplier is denoted in the bid document 50%. If the bidder wants to avail the Purchase preference, the bidder must upload a

certificate from in the format provided along with the tender, mentioning the percentage of the local content and the details of locations at which the local value addition is made along with their bid, failing which no purchase preference shall be granted. In case the bid value is more than Rs. 10 Crore, the declaration relating to percentage of local content shall be certified by the statutory auditor or cost auditor, if the bidder is a company and by a practicing cost accountant or chartered accountant for OEMs other than companies as per the Public Procurement (preference to Make-in-India) order 2017 dated 04.06.2020 and amendments thereof. In case Buyer has selected Purchase preference to Micro and Small Enterprises clause in the bid, the same will get precedence over this clause.

23. (XXII) ISRO PROPULSION COMPLEX (IPRC) is exempted from payment of Customs Duty under Notification No. 50/2017-Customs dated 30.06.2017 and as amended by Notification No.5/18 Customs dt:25/1/18. For imported items/components in the quoted product [as eligible as per Make In India policy of Govt. Of India], IPRC will provide Customs Duty Partial Exemption Certificate for availing Concessional CD and IGST for the import items/components in the quoted products.

24. (XXIII) Any bidder from a country which shares a land border with India will be eligible to bid in any procurement whether of goods, services (including consultancy services and non-consultancy services) or works (including turnkey projects) only if the bidder is registered with Competent Authority as specified in Office Memorandum no.F.No.6/18/2019-PPD, Ministry of Finance, Department of Expenditure, Public Procurement Division dated 23rd July 2020. All the conditions mentioned in the above OM is applicable for this tender

25. (XXIV) The bids shall be in INR only.

26. (XXV) Wherever the tenderer is asked to submit sample for evaluation of tenders, the same shall be submitted along with your quote.

7. Form No. 20

1. [Instructions to Tenderers]

2. a) Your offer should be valid for 90 days from the date of opening of the tender. b) Prices are required to be quoted according to the units indicated in the annexed tender form. When quotations are given in terms of units other than those specified in the tender form, relationship between the two sets of units must be furnished.

3. Preference will be given to those tenders offering supplies from ready stocks and on the basis of FOR destination/delivery at site.

4. (a) All available technical literature, catalogues and other data in support of the specifications and details of the items should be furnished along with the offer. (b) Samples, if called for, should be

submitted free of all charges by the tenderer and the Purchaser shall not be responsible for any loss or damage thereof due to any reason whatsoever. In the event of nonacceptance of tender, the tenderer will have to remove the samples at his own expense.

(c) Approximate net and gross weight of the items offered shall be indicated in your offer. If dimensional details are available the same should also be indicated in your offer.

(d) Specifications: Stores offered should strictly confirm to our specifications. Deviations, if any, should be clearly indicated by the tenderer in his quotation. The tenderer should also indicate the Make/Type number of the stores offered and provide catalogues, technical literature and samples, wherever necessary, along with the quotations. Test Certificates, wherever necessary, should be forwarded along with supplies. Wherever options have been called for in our specifications, the tenderer should address all such options. Wherever specifically mentioned by us, the tenderer could suggest changes to specifications with appropriate response for the same.

5. The purchaser shall be under no obligation to accept the lowest or any tender and reserves the right of acceptance of the whole or any part of the tender or portions of the quantity offered and the tenderers shall supply the same at the rates quoted.

6. The tenderer should supply along with his tender, the name of his bankers as well as the latest Income-Tax clearance certificate duly countersigned by the Income-Tax Officer of the Circle concerned under the seal of his office, if required by the Purchaser.

7. The purchaser reserves the right to increase/decrease the ordered quantity by up to 25-30 percent at any time, till final delivery date (or the extended delivery date of the contract), by giving reasonable notice even though the quantity ordered initially has been supplied in full before the last date of the delivery period (or the extended delivery period).

8. The authority of the person signing the tender, if called for, should be produced.

9. [Terms and Conditions of Tender]

10. DEFINITIONS:- (a) The term Purchaser shall mean the President of India or his successors or assigns.

11. (b) The term Contractor shall mean, the person, firm or company with whom or with which the order for the supply of Stores is placed and shall be deemed to include the Contractors successors, representative, heirs, executors and administrators unless excluded by the Contract.

12. (c) The term Stores shall mean what the Contractor agrees to supply under the Contract as specified in the Purchase Order including erection of plants & machinery and subsequent testing, should such a condition is included in the Purchase Order.

13. (d)The term Purchase Order shall mean the communication signed on behalf of the Purchaser by an Officer duly authorised intimating the acceptance on behalf of the Purchaser on the terms and conditions mentioned or referred to in the said communication accepting the tender or offer of the Contractor for supply of stores or plant, machinery or equipment or part thereof.

14. PRICES: Tender offering firm prices will be preferred. Where a price variation clause is insisted upon by a tenderer, quotation with a reasonable ceiling should be submitted. Such offers should invariably be supported by the base price taken into account at the time of tendering and also the formula for any such variation/s.

15. SECURITY DEPOSIT: Wherever, the Purchase Order value is Rs. 5.00 Lakhs or more, on acceptance of the tender, the Contractor shall, at the option of the Purchaser and within the period specified by him, deposit with him, in cash or in any other form as the Purchaser may determine, security deposit not exceeding three percent of the value of the Contract as the Purchaser shall specify [Please note the exact percentage of Security deposit that will be applicable to the tender will be mentioned in the C.2 Commercial Terms / Bid of the Bid document]. If the Contractor is called upon by the Purchaser to deposit Security and the Contractor fails to provide the security within the period specified, such failure shall constitute a breach of the Contract, and the Purchaser shall be entitled to make other arrangements for the re-purchase of the stores Contracted at the risk of the Contractor in terms of Sub-Clause (ii) and (iii) of clause regarding Delivery. (b) hereof and/or to recover from the Contractor, damages arising from such cancellation.

16. GUARANTEE & REPLACEMENT: (a) The Contractor shall guarantee that the stores supplied shall comply fully with the specifications laid down, for material, workmanship and performance. (b) For a period of twelve months after the acceptance of the stores, if any defects are discovered therein or any defects therein found to have developed under proper use, arising from faulty stores design or workmanship, the Contractor shall remedy such defects at his own cost provided he is called upon to do so within a period of 14 months from the date of acceptance thereof by the purchaser who shall state in writing in what respect the stores or any part thereof are faulty. (c) If, in the opinion of the purchaser, it becomes necessary to replace or renew any defective stores such replacement or renewal shall be made by the Contractor free of all costs to the purchaser, provided the notice informing the Contractor of the defect is given by the purchaser in this regard within the said period of 14 months from the date of acceptance thereof. (d) Should the Contractor fail to rectify the defects, the purchaser shall have the right to reject or repair or replace at the cost of the Contractor the whole or any portion of the defective stores. (e) The decision of the Purchaser notwithstanding any prior approval or acceptance or inspection thereof on behalf of the Purchaser, as to whether or not the Stores supplied by the Contractor are defective or any defect has developed within the said period of 12 months or any other period or as to whether the nature of defects requires renewal or replacement, shall be final, conclusive and binding on the Contractor. (f) To fulfill guarantee conditions outlined in (a) to (e) above, the Contractor shall, at the option of the Purchaser, furnish a Bank Guarantee (as prescribed by the Purchaser)

17. **PACKING FORWARDING & INSURANCE:** The Contractor will be held responsible for the stores being sufficiently and properly packed for transport by rail, road, sea or air to withstand transit hazards and ensure safe arrival at the destination. The packing and marking of packages shall be done by and at the expense of the Contractor. The purchaser will not pay separately for transit insurance, all risks in transit being exclusively of the Contractor and the Purchaser shall pay only for such stores as are actually received in good condition in accordance with the Contract.

18. **DESPATCH:** The Contractor is responsible for obtaining a clear receipt from the Transport Authorities specifying the goods despatched. The consignment should be despatched with clear Railway Receipt/Lorry Receipt. If sent in any other mode, it shall be at the risk of the Contractor. Purchaser will take no responsibility for short deliveries or wrong supply of goods when the same are booked on 'said to contain' basis. Purchaser shall pay for only such stores as are actually received by them in accordance with the Contract.

19. **TEST CERTIFICATE:** Wherever required, test certificates should be sent along with the despatch documents.

20. **ACCEPTANCE OF STORES:** (a) The stores shall be tendered by the Contractor for inspection at such places as may be specified by the purchaser at the Contractor's own risk, expense and cost. (b) It is expressly agreed that the acceptance of the stores Contracted for, is subject to final approval by the purchaser, whose decision shall be final. (c) If, in the opinion of the purchaser, all or any of the stores do not meet the performance or quality requirements specified in the Purchase Order, they may be either rejected or accepted at a price to be fixed by the purchaser and his decision as to rejection and the prices to be fixed shall be final and binding on the Contractor. (d) If the whole or any part of the stores supplied are rejected in accordance with Clause No. (c) above, the purchaser shall be at liberty, with or without notice to the Contractor, to purchase in the open market at the expense of the Contractor stores meeting the necessary performance and quality Contracted for in place of those rejected, provided that either the purchase, or the agreement to purchase, from another supplier is made within six months from the date of rejection of the stores as aforesaid.

21. **REJECTED STORES:** Rejected stores will remain at destination at the Contractor's risk and responsibility. If instructions for their disposal are not received from the Contractor within a period of 14 days from the date of receipt of the advice of rejection, the purchaser or his representative has, at his discretion, the right to scrap or sell or consign the rejected stores to Contractor's address at the Contractor's entire risk and expense, freight being payable by the Contractor at actuals.

22. **DELIVERY:**

(a) The time for and the date of delivery of the stores stipulated in the Purchase Order shall be deemed to be the essence of the Contract and delivery must be completed on or before the specified dates.

(b) Should the Contractor fail to deliver the stores or any consignment thereof within the period prescribed for such delivery, the purchaser shall be entitled at his option either.

(i) to recover from the Contractor as agreed liquidated damages and not by way of penalty, a sum of 0.5% per week of the price of any stores which the Contractor has failed to deliver as aforesaid or during which the delivery of such store may be in arrears subject to a minimum of 10%, or
(II) to purchase from elsewhere, without notice to the Contractor on the account and at the risk of the Contractor, the stores not delivered or others of a similar description (where others exactly complying with the particulars, are not, in the opinion of the purchaser, readily procurable, such opinion being final) without cancelling the Contract in respect of the consignment (s) not yet due for delivery, or
(iii) to cancel the Contract or a portion thereof and if so desired to purchase or authorise the purchase of stores not so delivered or others of a similar description (where others exactly if complying with the particulars are not, in the opinion of the purchaser, readily procurable, such opinion final) at the risk and cost of the Contractor.

In the event of action being taken under sub-clause (ii) & (iii) of above, the Contractor shall be liable for any loss which the purchaser may sustain on that account, provided that the re-purchase or if there is an agreement to repurchase then such agreement is made within six months from the date of such failure. But the Contractor shall not be entitled to any gain on such re-purchase made against default. The manner and method of such re-purchase shall be at the discretion of the purchaser, whose decision shall be final. It shall not be necessary for the purchaser to serve a notice of such re-purchase on the defaulting Contractor.

This right shall be without prejudice to the right of the purchaser to recover damages for breach of Contract by the Contractor.

23. EXTENSION OF TIME:As soon as it is apparent that the Contract dates cannot be adhered to, an application shall be sent by the Contractor to the purchaser. If failure, on the part of the Contractor, to deliver the stores in proper time shall have arisen from any cause which the purchaser may admit as reasonable ground for an extension of the time (and his decision shall be final) he may allow such additional time as he considers it to be justified by circumstances, of the case without prejudice to the purchaser's right to recover liquidated damages under clause mentioned in the heading DELIVERY.

24. ERECTION OF PLANT & MACHINERY:

Wherever erection of a plant or machinery is the responsibility of the Contractor as per the terms of the Contract and in case the Contractor fails to carry out the erection as and when called upon to do so within the period specified by the purchaser, the purchaser shall have the right to get the erection done through any source of his choice. In such an event, the Contractor shall be liable to bear any additional expenditure that the purchaser is liable to incur towards erection. The Contractor shall, however, not be entitled to any gain due to such an action by the purchaser.

25. PAYMENT: Contractor's bill will be passed for payment only after the stores have been received, inspected and accepted by the Purchaser.

MODE OF PAYMENT: Normally payment will be made for the accepted stores within 30 days from the

date of receipt of the materials.

26. RECOVERY OF SUM DUE:

Whenever any claim for the payment of, whether liquidated or not, money arising out of or under this Contract against the Contractor, the purchaser shall be entitled to recover such sum by appropriating in part or whole, the security deposited by the Contractor, if a security is taken against the Contract. In the event of the security being insufficient or if no security has been taken from the Contractor, then the balance or the total sum recoverable as the case may be, shall be deducted from any sum then due or which at any time thereafter may become due to the Contractor under this or any other Contract with the purchaser. Should this sum be not sufficient to cover the full amount recoverable, the Contractor shall pay to the purchaser on demand the remaining balance due. Similarly, if the purchaser has or makes any claim, whether liquidated or not, against the Contractor under any other Contract with the purchaser, the payment of all moneys payable under the Contract to the Contractor including the security deposit shall be withheld till such claims of the purchaser are finally adjudicated upon and paid by the Contractor.

27. INDEMNITY:

The Contractor shall warrant and be deemed to have warranted that all stores supplied against this Contract are free and clean of infringement of any Patent, Copyright or Trademark, and shall at all times indemnify the purchaser against all claims which may be made in respect of the stores for infringement of any right protected by Patent Registration of design or Trade mark and shall take all risk of accidents or damage which may cause a failure of the supply from whatever cause arising and the entire responsibility for sufficiency of all means used by him for the fulfillment of the contract.

28. ARBITRATION:- In the event of any dispute or difference arising under these terms & conditions or any condition contained in the Purchase Order or in connection with this Contract. (except as to any matter the decision of which is specially provided for by these conditions), the same shall be referred to the sole arbitration of the Head of the Purchase Office or of some other person appointed by him, and the dispute further processed in terms of the Arbitration & Conciliation Act, 1996 and its amendment from time to time. There will be no objection that the arbitrator is a Government Servant that he had to deal with matter which the Contract relates to or that in the course of his duties as Government Servant has expressed views on all or any of the matters in dispute or difference. The award of the arbitrator shall be final and binding on the parties of this Contract.

29. If the arbitrator is the Head of the Purchase Office : (i) In the event of his being transferred or vacating his office by resignation or otherwise, it shall be lawful for his successor in office either to proceed with the reference himself for to appoint another person as arbitrator, or In the event of his being unwilling or unable to act for any reason, it shall be lawful for the Head of the Purchase Office to appoint another person as arbitrator

30. If the arbitrator is a person appointed by the Head of the Purchase Office, In the event of his

denying or neglecting or refusing to act, or resigning or being unable to act, for any reason, shall be lawful for the Head of the Purchase Office either to proceed with the reference himself or to appoint another person as arbitrator in place of the outgoing arbitrator subject, as aforesaid, to the Arbitration and Conciliation Act, 1996, and the rules thereunder and any statutory modifications thereof for the time being in force shall be deemed to apply to the arbitration proceeding under the clause. The Arbitrator shall have the power to extend with the consent of the Purchaser and the Contractor the time for making and publishing the award. The venue of arbitration shall be the place as the Purchaser in his absolute discretion may determine. Work under the Contract shall, if reasonably possible, continue during Arbitration Proceedings.

31. COUNTER TERMS AND CONDITION OF SUPPLIERS:Where counter terms and conditions printed or cyclostyled conditions have been offered by the supplier, the same shall not be deemed to have been accepted by the Purchaser, unless specific written acceptance thereof is obtained.

32. SECURITY FOR PURCHASE OF MATERIALS:Successful tenderer will have to furnish in the form of a bank guarantee or any other form as called for by the purchaser towards adequate security for the materials and properties provided by the Purchaser for the due execution of the Contract.

8. PPP Make in India(Non- Divisible Items-Class I & II Local Suppliers Only)

1. In line with Public Procurement (Preference to Make in India), Order 2017 & its amendments issued by Govt. of India from time to time [Latest OM Ref:No. P-45021/2/2017-PP (BE-II)-Part(4)Vol. 11 Dtd. 19/07/2024] with a view to support the Indian industries, ISRO has implemented "Purchase Preference Policy". The "Purchase Preference" is applicable for the "Class-I Local Supplier" for the goods/ services/ works covered in this tender, subject to the following terms & conditions:-

2. a) The subject item falls under Non-divisible category. b) The offers sought only from Class-I & Class-II local suppliers

3. Definitions: A supplier or service provider, whose goods, services or works offered for procurement, has local content: a)Equal to or more than 50% : Class-I local supplier. b)Minimum 20% but less than 50% : Class-II local supplier. c) Less than 20% : Non-local supplier.

4. 'Local content' means the amount of value added in India (i.e. indigenous items/services added in the offered products/ services/ works) be the total value of the item offered (excluding net domestic indirect taxes) minus the value of imported content in the item (including all customs duties/IGST) as a proportion of the total value (excluding net domestic indirect taxes), in percent.

5. Explanatory notes for calculation of local content given above:-

a Imported items sourced locally from resellers/distributors shall be excluded from calculation of local content.

- b. The license fees/royalties paid/ technical charges paid out of India shall be excluded from local content calculation.
- c. Procurement/Supply of repackaged/refurbished/rebranded imported products as understood commonly shall be treated as reselling of imported products and shall be excluded from calculation of local content. The definition of repackaged/refurbished/rebranded imported products is as follows; Refurbishing means repair or reconditioning of an imported product does not amount to manufacture because no new goods come into existence.
Repackaging means repacking of imported goods from bulk pack to smaller packs would not ordinarily amount to manufacture of a new item.
Rebranding means relabeling or renaming or change in symbol or logo/makes or corporate image of a company/organization/ firm for an imported product would amount to rebranding.
6. The margin of Purchase Preference shall be up to 20%.
7. 'Margin of purchase preference' means the maximum extent to which the price quoted by the "Class-I local supplier" above the L1 (landed cost).
8. 'L1' means the lowest technically accepted tender / bid / quotation (i.e. lowest landed cost including duties, taxes and freight & Insurance etc).
9. Works means all works as per Rule 130 of GFR- 2017, and will also include 'turnkey works'. Works includes Engineering, Procurement and Construction (EPC) contracts and services include System Integrator (SI) contracts.
10. Purchase Preference Policy:- Goods/Works which are not divisible (ie., required quantity is 1 or as a package) and Services:
- a) If L1 is from a 'Class-I local supplier', the contract will be awarded to L1 bidder.
- b) If L1 is not from a 'Class-I local supplier', the lowest bidder among the 'Class-I local supplier' will be invited to match the L1 price subject to local supplier's quoted price falling within the margin of purchase preference (i.e. 20%) and the contract shall be awarded to such 'Class-I local supplier' subject to matching the L1 price (inclusive of duties, taxes and freight & insurance).
- c) In case such lowest eligible 'Class-I local supplier' fails to match the L1 price, the 'Class-I local supplier' with the next higher bid within the margin of purchase preference shall be invited to match the L1 price and so on, and order/contract shall be awarded accordingly. In case where none of the 'Class-I local supplier' within the margin of purchase preference agree to match the L1 price, then the order/contract shall be awarded to the original L1 Bidder.
11. The 'Class-I & II local supplier' should provide a "Self Certification" along with technical offer indicating that the item offered meets the minimum local content [as per Sl. No.(3)] as called for in the tender and provide the percentage of local content along with details of the location(s) at which the local value addition is made. In case of two bid tenders, it is mandatory to indicate compliance to

MLC(minimum Local Content) in technical bid itself.

12. The ink-signed certificate shall be provided on vendors letter head along with the offer (in case of online tender, copy of ink-signed certificate shall be uploaded along with your offer under concerned tab. Original in Hard copy shall be produced on request). In case of non-submission of certificate, the purchase preference shall not apply.

13. A committee (with an external expert from a practicing cost accountant or practicing chartered accountant, if required) constituted for independent verification shall verify the self-declarations & auditor's / accountant's certificates on random basis, as per the requirements.

14. In cases the quoted price is in excess of Rs.1000 Lakhs (including duties, taxes and freight & Insurance) the 'Class-I & II local supplier shall provide a certificate from the statutory auditor or cost auditor of the company (in the case of companies) or from a practicing cost accountant or practicing chartered accountant (in case of suppliers other than companies) giving the percentage of local content.

15. In case of a complaint received from any local supplier indicating a need for review / verification of Local content of successful vendor / awarded vendor, for accepting a complaint from such complainant (w.r.t the false declaration given by the successful vendor on the local content), a complaint fee of Rs.2 Lakhs or 1% of the locally manufactured items being procured (subject to a maximum Rs. 5Lakhs), whichever was higher, to be paid by demand draft by the complainant. In case, the complaint is found to be incorrect, the complaint fee shall be forfeited. In case, the complaint is upheld and found to be substantially correct, deposited fee of the complainant would be refunded without any interest.

16. False declarations will be in breach of the Code of Integrity under Rule GFR 175(1)(i)(h) of the General Financial Rules for which a bidder or its successors can be debarred for up to two years as per GFR Rule 151 (iii) of the General Financial Rules along with such other actions as may be permissible under law.

17. The Public Procurement (Preference to Make in India), Order 2017 issued by Govt. of India indicates that if there are any general or specific restrictive clauses to restrict participation of Indian companies in those countries procurement tenders, reciprocity clause need to be invoked as per the order. Hence, if ISRO or Govt. of India come across that Indian suppliers of an item are not allowed to participate and / or compete in procurement by your government, the bid submitted by you will be not be considered and excluded from eligibility for procurement. Please note this point.

9. Format for Self Certification under Preference to MAKE IN INDIA Policy CERTIFICATE

1. In line with Government Public Procurement Order No. P-45021/2/2017-BE-II dt. 15.06.2017, as amended from time to time and as applicable on the date of submission of tender, we hereby

certify that we M/s. _____(supplier name) are local supplier meeting the requirement of minimum percentage of Local content _____ (class I/Class II) as defined in above orders for the materials against Tender No. _____

2. The HSN No. of the item/s are being supplied is -----

3. Percentage of Local value addition, involved in the item/s are:

- 1.
- 2.
- 3.

4. Details of Local value additions being made

5. Address of locations at which the above local value addition will be made is as follows:

6. Class of Local supplier (Class-I/Class-II): Specify

7. Local Content means the amount of value added in India which shall, be the total value of the item being offered minus the value of the imported content in the item (including all customs duties) as a proportion of the total value, in percent.

The Local Content mentioned above does not contain services such as transportation, insurance, installation, commissioning, training and after sales service support like AMC etc as value addition. [As per DPIITs OM Ref P-45021/102/2019-BE-II-Paart(1)(E-50310) Dtd. 04/03/2021]

8. It is certified that the above mentioned Local content is excluding the following (a) (b) & (c):-

- a. Imported items sourced locally from resellers/distributors are excluded from calculation of the above local content.
- b. The license fees/royalties paid/ technical charges paid out of India shall be excluded from local content calculation.
- c. Procurement/Supply of repackaged/refurbished/rebranded imported products as understood commonly shall be treated as reselling of imported products and shall be excluded from calculation of local content.

The definition of repackaged/refurbished/rebranded imported products is as follows; Refurbishing means repair or reconditioning of an imported product does not amount to manufacture because no new goods come into existence. Repackaging means repacking of imported goods from bulk pack to smaller packs would not ordinarily amount to manufacture of a new item. Rebranding means relabeling or renaming or change in symbol or logo/makes or corporate image of a company/organization/ firm for an imported product would amount to rebranding.

9. We also understand, false declarations will be in breach of the Code in Integrity under Rule 175(1) (i) (h) of the General Financial Rule for which a bidder or its successors can be debarred for up to two years as per Rule 151 (iii) of the General Financial Rules along with such other actions as may be permissible under law.

10. Seal and Signature of Authorized Signatory

10. Conditions for BIDDER FROM A COUNTRY WHICH SHARES LAND BORDER WITH INDIA

1. As per the Rule 144(xi) of General Financial Rule, 2017, any bidder from a country which shares a land border with India will be eligible to bid in any procurement whether of goods, services (including consultancy services and non-consultancy services) or works (including turnkey projects) only if the bidder is registered with the competent authority i.e., Department for Promotion of Industry and Internal Trade (DPIIT).

2. Bidder (including the term bidder, consultant or service provider in certain contexts) means any person or firm or company, including any member of a consortium or joint venture (that is an association of several persons, or firms or companies), every artificial juridical person not falling in any of the descriptions of bidders stated here in before, including any agency branch or office controlled by such person, participating in a procurement process.

3. Bidder (or entity) from a country which shares a land border with India" for the purpose of this Order means: -

- (a) An entity incorporated, established, or registered in such a country; or
- (b) A subsidiary of an entity incorporated, established, or registered in such a country; or
- (c) An entity substantially controlled through entities incorporated, established, or registered in such a country; or
- (d) An entity whose beneficial owner is situated in such a country; or
- (e) An Indian (or other) agent of such an entity; or
- (f) A natural person who is a citizen of such a country; or
- (g) A consortium or joint venture where any member of the consortium or joint venture falls under any of the above

4. An Agent is a person employed to do any act for another, or to represent another in dealings with third person.

5. The successful bidder shall not be allowed to sub-contract works to any contractor from a country which shares a land border with India unless such contractor is registered with the Competent Authority.

6. Hence, Vendors or Agents of a Vendor (Indian or others) from a country sharing border with India

shall submit copy of valid registration made with Department for Promotion of Industry and Internal Trade (DPIIT), Government of India along with the tender mandatorily, without which the offer will be treated as invalid.

7. Model Certificate for Tenders :I have read the clause regarding restrictions on procurement from a bidder of a country which shares a land border with India; I certify that this bidder is not from such a country or, if from such a country, has been registered with the Competent Authority. I hereby certify that this bidder fulfills all requirements in this regard and is eligible to be considered. [Where applicable, evidence of valid registration by the Competent Authority shall be attached.]. Please submit this declaration duly signed and stamped by your Authorized signatory in your Company/OEMs Letter head.

8. Validity of Registration: Registration should be valid at the time of submission of bids and should be valid at the time of placement of order.

9. Important Note:-Sub-contracting is not permitted by any contractor to a contractor from a country sharing a land border with India unless registered with the competent authority. However, it is to be noted that procurement of raw materials, components, sub assemblies, etc., does not constitute sub-contracting. In case a bidder has proposed to supply finished goods procured directly/ indirectly from the vendors from the countries that share a land border with India, such vendor will be required to be registered with the Competent Authority as per the provisions of Rule 144 (xi) of GFR, 2017

10. Any false declaration and non-compliance of the above would be a ground for immediate rejection of offer or termination of the contract and further legal action in accordance with the laws.

11. Declaration with respect to restrictions on procurement from a bidder of a country which shares a land border with India

1. (In bidders Company Letter head with Sign & Seal)

Tender No:

Restrictions under Rule 144 (xi) of the General Financial Rules (GFRs), 2017

[Declaration with respect to restrictions on procurement from a bidder of a country which shares a land border with India]

"I have read the clause regarding restrictions on procurement from a bidder of a country which shares a land border with India; I certify that this bidder is not from such a country or, if from such a country, has been registered with the Competent Authority. I hereby certify that this bidder fulfills all

requirements in this regard and is eligible to be considered. [Where applicable, evidence of valid registration by the Competent Authority shall be attached.]"

Important Note:- It is certified that the products proposed for supply in our offer are NOT procured directly/ indirectly from the vendors from the countries that share a land border with India. If the supply is from such a vendor the required registration certificate will be provided [as per Rule 144 (xi) of GFR, 2017].

Place (Sd/-)

Date

Signatory

Company Seal

Authorized

12. GeM Seller ID

1. GeM Seller Registration: All vendors shall register themselves in GeM Portal (gem.gov.in) and provide GeM Seller unique ID in the tender documents, as this ID is mandatory for award of contract.

C. Bid Templates

C.1 Technical Bid - SMART Pressure Transmitters

1. Absolute Pressure Transmitter (SMART) (Medium: GN2, Air, DM water & Water; Range up to 200bar)

Item specifications for Absolute Pressure Transmitter (SMART)

SI No	Specification	Value	Compliance	Offered Specification	Remark
1	Specification of SMART Absolute Pressure Transmitter:		-		
2	Parameters	Specification	Yes / No / Explain		
3	Type	SMART Absolute Pressure Transmitter	Yes / No / Explain		
4	Measurement Range	As per Table 1 in Annexure-A	Yes / No / Explain		
5	Service Medium	As per Table 1 in Annexure-A	Yes / No / Explain		
6	Maximum Turndown Ratio (TD)	100:1	Yes / No / Explain		
7	Output	Two wire 4–20 mA with superimposed Digital communication HART protocol.	Yes / No / Explain		
8	Power Supply	12 to 30 V DC.	Yes / No / Explain		
9	Local Indication	min 4½ digits LCD – Local Alpha Numeric Digital display in Engineering units.	Yes / No / Explain		
10	Hazardous Area Certification	Both Intrinsically safe and Explosion proof suitable for use in Hydrogen atmosphere. (CENLEC / CSA / FM / ATEX or any equivalent approval).	Yes / No / Explain		

11	Safety Integrity Level Standard (SIL)	Safety Instrumented System Certification as per IEC 61508 standard, SIL 2 and above.	Yes / No / Explain		
12	Zero & Span Adjustments	Zero and Span are to be adjusted from the Handheld HART Communicator and provision for local adjustment to be set anywhere within the range limits.	Yes / No / Explain		
13	Failure mode alarms	High alarm ≥ 21.0 mA, Low Alarm ≤ 3.6 mA	Yes / No / Explain		
14	Accuracy @ TD 8:1	$\leq \pm 0.09$ % of Calibrated span (including the effect of Terminal - Based linearity, hysteresis & repeatability)	Yes / No / Explain		
15	Ambient Temperature Effect for 28°C variation @ TD 8:1	$\leq \pm 0.4$ % of span	Yes / No / Explain		
16	Stability	$\leq \pm 0.2$ % of URL for 10 years	Yes / No / Explain		
17	Power Supply Effect	$\leq \pm 0.005$ % of Calibrated Span per Volt.	Yes / No / Explain		
18	Nominal Operating Temperature	-20 – 70°C	Yes / No / Explain		
19	Total Response time	≤ 150 millisecond	Yes / No / Explain		
20	Wetted Material	As per Table 3 in Annexure-A	Yes / No / Explain		
21	Fill Fluid	As per Table 3 in Annexure-A	Yes / No / Explain		
22	Transient/Lightening Protection	To be provided	Yes / No / Explain		
23	Electrical Connection	$\frac{1}{2}$ " – 14 NPT (F) with SS plug for dust proof.	Yes / No / Explain		
24	Transmitter Process connection	$\frac{1}{2}$ " – 14 NPT (F) or suitable for the quoted manifold	Yes / No / Explain		
25	Housing Material	Polyurethane covered aluminum with $\frac{1}{2}$ " - 14 NPT conduit entry.	Yes / No / Explain		

26	External Grounding screw assembly on transmitter body	Required	Yes / No / Explain		
27	Mounting Bracket	Stainless Steel Bracket with SS fasteners, bolts, nuts, washers and U- clamps suitable for 2 inch pipe mounting.	Yes / No / Explain		
28	Calibration	Calibration shall be carried out at room temperature in 5 steps ascending and 5 steps descending. Calibration certificate is to be provided. Calibration shall be traceable to National Standards.	Yes / No / Explain		
29	Manifold	2-way valve manifold to be integrated with transmitter and supplied.	Yes / No / Explain		
30	Specification of Manifold		-		
31	manifold Type	2 valve manifold	Yes / No / Explain		
32	Material	316SS	Yes / No / Explain		
33	Packing material	PTFE	Yes / No / Explain		
34	Seat type	Integral	Yes / No / Explain		
35	Instrument Connection	Suitable for quoted transmitter interface	Yes / No / Explain		
36	Process connection	½ inch-14 NPTF	Yes / No / Explain		
37	Maximum Operating Pressure	400 bar manifold for transmitter range upto 250 bar, 680 bar manifold for transmitter range between 250 to 500 bar	Yes / No / Explain		
38	Operating Temperature	0 to 100 Deg C	Yes / No / Explain		

39	Hydro Testing	To be carried out at 1.5 times the maximum operating pressure for all the manifolds and certificate to be provided	Yes / No / Explain		
40	Material Test certificate	To be provided	Yes / No / Explain		
41	Mounting Bolts	To be supplied with SS material.	Yes / No / Explain		

Document : Specification of AP Tx with manifold

2. Absolute Pressure Transmitter (SMART)(Medium: GN2, Air, DM water & Water; Range above 200bar)

Item specifications for Absolute Pressure Transmitter (SMART)

SI No	Specification	Value	Compliance	Offered Specification	Remark
1	Specification of SMART Absolute or Gauge Pressure Transmitter:		-		
2	Parameters	Specification	Yes / No / Explain		
3	Type	SMART Absolute or Gauge Pressure Transmitter	Yes / No / Explain		
4	Measurement Range	As per Table 1 in Annexure-A	Yes / No / Explain		
5	Service Medium	As per Table 1 in Annexure-A	Yes / No / Explain		
6	Maximum Turndown Ratio (TD)	100:1	Yes / No / Explain		
7	Output	Two wire 4–20 mA with superimposed Digital communication HART protocol.	Yes / No / Explain		
8	Power Supply	12 to 30 V DC.	Yes / No / Explain		
9	Local Indication	min 4½ digits LCD – Local Alpha Numeric Digital display in Engineering units.	Yes / No / Explain		

10	Hazardous Area Certification	Both Intrinsically safe and Explosion proof suitable for use in Hydrogen atmosphere. (CENLEC / CSA / FM / ATEX or any equivalent approval).	Yes / No / Explain		
11	Safety Integrity Level Standard (SIL)	Safety Instrumented System Certification as per IEC 61508 standard, SIL 2 and above.	Yes / No / Explain		
12	Zero & Span Adjustments	Zero and Span are to be adjusted from the Handheld HART Communicator and provision for local adjustment to be set anywhere within the range limits.	Yes / No / Explain		
13	Failure mode alarms	High alarm ≥ 21.0 mA, Low Alarm ≤ 3.6 mA	Yes / No / Explain		
14	Accuracy @ TD 2.5:1	$\leq \pm 0.09$ % of Calibrated span (including the effect of Terminal - Based linearity, hysteresis & repeatability)	Yes / No / Explain		
15	Ambient Temperature Effect for 28°C variation @ TD 2.5:1	$\leq \pm 0.4$ % of span	Yes / No / Explain		
16	Stability	$\leq \pm 0.2$ % of URL for 10 years	Yes / No / Explain		
17	Power Supply Effect	$\leq \pm 0.005$ % of Calibrated Span per Volt.	Yes / No / Explain		
18	Nominal Operating Temperature	-20 – 70°C	Yes / No / Explain		
19	Total Response time	≤ 150 millisecond	Yes / No / Explain		
20	Wetted Material	As per Table 3 in Annexure-A	Yes / No / Explain		
21	Fill Fluid	As per Table 3 in Annexure-A	Yes / No / Explain		
22	Transient/Lightening Protection	To be provided	Yes / No / Explain		
23	Electrical Connection	$\frac{1}{2}$ " – 14 NPT (F) with SS plug for dust proof.	Yes / No / Explain		

24	Transmitter Process connection	½ " – 14 NPT (F) or suitable for the quoted manifold	Yes / No / Explain		
25	Housing Material	Polyurethane covered aluminum with ½"- 14 NPT conduit entry.	Yes / No / Explain		
26	External Grounding screw assembly on transmitter body	Required	Yes / No / Explain		
27	Mounting Bracket	Stainless Steel Bracket with SS fasteners, bolts, nuts, washers and U- clamps suitable for 2 inch pipe mounting.	Yes / No / Explain		
28	Calibration	Calibration shall be carried out at room temperature in 5 steps ascending and 5 steps descending. Calibration certificate is to be provided. Calibration shall be traceable to National Standards.	Yes / No / Explain		
29	Manifold	2-way valve manifold to be integrated with transmitter and supplied.	Yes / No / Explain		
30	Specification of Manifold		-		
31	manifold Type	2 valve manifold	Yes / No / Explain		
32	Material	316SS	Yes / No / Explain		
33	Packing material	PTFE	Yes / No / Explain		
34	Seat type	Integral	Yes / No / Explain		
35	Instrument Connection	Suitable for quoted transmitter interface	Yes / No / Explain		
36	Process connection	½ inch-14 NPTF	Yes / No / Explain		
37	Maximum Operating Pressure	400 bar manifold for transmitter range upto 250 bar, 680 bar manifold for transmitter range between 250 to 500 bar	Yes / No / Explain		

38	Operating Temperature	0 to 100 Deg C	Yes / No / Explain		
39	Hydro Testing	To be carried out at 1.5 times the maximum operating pressure for all the manifolds and certificate to be provided	Yes / No / Explain		
40	Material Test certificate	To be provided	Yes / No / Explain		
41	Mounting Bolts	To be supplied with SS material.	Yes / No / Explain		

Document : Specification of AP Tx with manifold

3. Absolute Pressure Transmitter (SMART) (Medium: GO2; Range up to 200bar)

Item specifications for Absolute Pressure Transmitter (SMART)

SI No	Specification	Value	Compliance	Offered Specification	Remark
1	Specification of SMART Absolute Pressure Transmitter:		-		
2	Parameters	Specification	Yes / No / Explain		
3	Type	SMART Absolute Pressure Transmitter	Yes / No / Explain		
4	Measurement Range	As per Table-1 in Annexure-A	Yes / No / Explain		
5	Service Medium	GO2	Yes / No / Explain		
6	Maximum Turndown Ratio (TD)	100:1	Yes / No / Explain		
7	Output	Two wire 4–20 mA with superimposed Digital communication HART protocol.	Yes / No / Explain		
8	Power Supply	12 to 30 V DC.	Yes / No / Explain		
9	Local Indication	min 4½ digits LCD – Local Alpha Numeric Digital display in Engineering units.	Yes / No / Explain		

10	Hazardous Area Certification	Both Intrinsically safe and Explosion proof suitable for use in Hydrogen atmosphere. (CENLEC / CSA / FM / ATEX or any equivalent approval).	Yes / No / Explain		
11	Safety Integrity Level Standard (SIL)	Safety Instrumented System Certification as per IEC 61508 standard, SIL 2 and above.	Yes / No / Explain		
12	Zero & Span Adjustments	Zero and Span are to be adjusted from the Handheld HART Communicator and provision for local adjustment to be set anywhere within the range limits.	Yes / No / Explain		
13	Failure mode alarms	High alarm ≥ 21.0 mA, Low Alarm ≤ 3.6 mA	Yes / No / Explain		
14	Accuracy @ TD 8:1	$\leq \pm 0.09$ % of Calibrated span (including the effect of Terminal - Based linearity, hysteresis & repeatability)	Yes / No / Explain		
15	Ambient Temperature Effect for 28°C variation @ TD 8:1	$\leq \pm 0.4$ % of span	Yes / No / Explain		
16	Stability	$\leq \pm 0.2$ % of URL for 10 years	Yes / No / Explain		
17	Power Supply Effect	$\leq \pm 0.005$ % of Calibrated Span per Volt.	Yes / No / Explain		
18	Nominal Operating Temperature	-20 – 70°C	Yes / No / Explain		
19	Total Response time	≤ 150 millisecond	Yes / No / Explain		
20	Wetted Material	As per Table-3 in Annexure-A	Yes / No / Explain		
21	Fill Fluid	As per Table-3 in Annexure-A	Yes / No / Explain		
22	Transient/Lightening Protection	To be provided	Yes / No / Explain		
23	Electrical Connection	$\frac{1}{2}$ " – 14 NPT (F) with SS plug for dust proof.	Yes / No / Explain		

24	Transmitter Process connection	½ " – 14 NPT (F) or suitable for the quoted manifold	Yes / No / Explain		
25	Housing Material	Polyurethane covered aluminum with ½"- 14 NPT conduit entry.	Yes / No / Explain		
26	External Grounding screw assembly on transmitter body	Required	Yes / No / Explain		
27	Mounting Bracket	Stainless Steel Bracket with SS fasteners, bolts, nuts, washers and U- clamps suitable for 2 inch pipe mounting.	Yes / No / Explain		
28	Calibration	Calibration shall be carried out at room temperature in 5 steps ascending and 5 steps descending. Calibration certificate is to be provided. Calibration shall be traceable to National Standards.	Yes / No / Explain		
29	Manifold	2-way valve manifold to be integrated with transmitter and supplied.	Yes / No / Explain		
30	Specification of Manifold		-		
31	manifold Type	2 valve manifold	Yes / No / Explain		
32	Material	316SS	Yes / No / Explain		
33	Packing material	PTFE	Yes / No / Explain		
34	Seat type	Integral	Yes / No / Explain		
35	Instrument Connection	Suitable for quoted transmitter interface	Yes / No / Explain		
36	Process connection	½ inch-14 NPTF	Yes / No / Explain		
37	Maximum Operating Pressure	400 bar manifold for transmitter range upto 250 bar, 680 bar manifold for transmitter range between 250 to 500 bar	Yes / No / Explain		

38	Operating Temperature	0 to 100 Deg C	Yes / No / Explain		
39	Hydro Testing	To be carried out at 1.5 times the maximum operating pressure for all the manifolds and certificate to be provided	Yes / No / Explain		
40	Material Test certificate	To be provided	Yes / No / Explain		
41	Mounting Bolts	To be supplied with SS material.	Yes / No / Explain		
42	Oxygen cleaning	Oxygen cleaning to be carried out for transmitters operating medium is oxygen	Yes / No / Explain		

Document : Specification of AP Tx with manifold

4. Absolute Pressure Transmitter (SMART) (Medium: GO₂; Range above 200bar)

Item specifications for Absolute Pressure Transmitter (SMART)

SI No	Specification	Value	Compliance	Offered Specification	Remark
1	Specification of SMART Absolute or Gauge Pressure Transmitter:		-		
2	Parameters	Specification	Yes / No / Explain		
3	Type	SMART Absolute or Gauge Pressure Transmitter	Yes / No / Explain		
4	Measurement Range	As per Table-1 in Annexure-A	Yes / No / Explain		
5	Service Medium	GO ₂	Yes / No / Explain		
6	Maximum Turndown Ratio (TD)	100:1	Yes / No / Explain		
7	Output	Two wire 4–20 mA with superimposed Digital communication HART protocol.	Yes / No / Explain		
8	Power Supply	12 to 30 V DC.	Yes / No / Explain		

9	Local Indication	min 4½ digits LCD – Local Alpha Numeric Digital display in Engineering units.	Yes / No / Explain		
10	Hazardous Area Certification	Both Intrinsically safe and Explosion proof suitable for use in Hydrogen atmosphere. (CENLEC / CSA / FM / ATEX or any equivalent approval).	Yes / No / Explain		
11	Safety Integrity Level Standard (SIL)	Safety Instrumented System Certification as per IEC 61508 standard, SIL 2 and above.	Yes / No / Explain		
12	Zero & Span Adjustments	Zero and Span are to be adjusted from the Handheld HART Communicator and provision for local adjustment to be set anywhere within the range limits.	Yes / No / Explain		
13	Failure mode alarms	High alarm ≥ 21.0 mA, Low Alarm ≤ 3.6 mA	Yes / No / Explain		
14	Accuracy @ TD 2.5:1	$\leq \pm 0.09$ % of Calibrated span (including the effect of Terminal - Based linearity, hysteresis & repeatability)	Yes / No / Explain		
15	Ambient Temperature Effect for 28°C variation @ TD 2.5:1	$\leq \pm 0.4$ % of span	Yes / No / Explain		
16	Stability	$\leq \pm 0.2$ % of URL for 10 years	Yes / No / Explain		
17	Power Supply Effect	$\leq \pm 0.005$ % of Calibrated Span per Volt.	Yes / No / Explain		
18	Nominal Operating Temperature	-20 – 70°C	Yes / No / Explain		
19	Total Response time	≤ 150 millisecond	Yes / No / Explain		
20	Wetted Material	As per Table-3 in Annexure-A	Yes / No / Explain		
21	Fill Fluid	As per Table-3 in Annexure-A	Yes / No / Explain		
22	Transient/Lightening Protection	To be provided	Yes / No / Explain		

23	Electrical Connection	½ " – 14 NPT (F) with SS plug for dust proof.	Yes / No / Explain		
24	Transmitter Process connection	½ " – 14 NPT (F) or suitable for the quoted manifold	Yes / No / Explain		
25	Housing Material	Polyurethane covered aluminum with ½" - 14 NPT conduit entry.	Yes / No / Explain		
26	External Grounding screw assembly on transmitter body	Required	Yes / No / Explain		
27	Mounting Bracket	Stainless Steel Bracket with SS fasteners, bolts, nuts, washers and U- clamps suitable for 2 inch pipe mounting.	Yes / No / Explain		
28	Calibration	Calibration shall be carried out at room temperature in 5 steps ascending and 5 steps descending. Calibration certificate is to be provided. Calibration shall be traceable to National Standards.	Yes / No / Explain		
29	Manifold	2-way valve manifold to be integrated with transmitter and supplied.	Yes / No / Explain		
30	Specification of Manifold		-		
31	manifold Type	2 valve manifold	Yes / No / Explain		
32	Material	316SS	Yes / No / Explain		
33	Packing material	PTFE	Yes / No / Explain		
34	Seat type	Integral	Yes / No / Explain		
35	Instrument Connection	Suitable for quoted transmitter interface	Yes / No / Explain		
36	Process connection	½ inch-14 NPTF	Yes / No / Explain		

37	Maximum Operating Pressure	400 bar manifold for transmitter range upto 250 bar, 680 bar manifold for transmitter range between 250 to 500 bar	Yes / No / Explain		
38	Operating Temperature	0 to 100 Deg C	Yes / No / Explain		
39	Hydro Testing	To be carried out at 1.5 times the maximum operating pressure for all the manifolds and certificate to be provided	Yes / No / Explain		
40	Material Test certificate	To be provided	Yes / No / Explain		
41	Mounting Bolts	To be supplied with SS material.	Yes / No / Explain		
42	Oxygen cleaning	Oxygen cleaning to be carried out for transmitters operating medium is oxygen	Yes / No / Explain		

Document : Specification of AP Tx with manifold

5. Absolute Pressure Transmitter (SMART) (Medium: GH2; Range up to 200bar)

Item specifications for Absolute Pressure Transmitter (SMART)

SI No	Specification	Value	Compliance	Offered Specification	Remark
1	Specification of SMART Absolute Pressure Transmitter:		-		
2	Parameters	Specification	Yes / No / Explain		
3	Type	SMART Absolute Pressure Transmitter	Yes / No / Explain		
4	Measurement Range	As per Table-1 in Annexure-A	Yes / No / Explain		
5	Service Medium	GH2	Yes / No / Explain		
6	Maximum Turndown Ratio (TD)	100:1	Yes / No / Explain		

7	Output	Two wire 4–20 mA with superimposed Digital communication HART protocol.	Yes / No / Explain		
8	Power Supply	12 to 30 V DC.	Yes / No / Explain		
9	Local Indication	min 4½ digits LCD – Local Alpha Numeric Digital display in Engineering units.	Yes / No / Explain		
10	Hazardous Area Certification	Both Intrinsically safe and Explosion proof suitable for use in Hydrogen atmosphere. (CENLEC / CSA / FM / ATEX or any equivalent approval).	Yes / No / Explain		
11	Safety Integrity Level Standard (SIL)	Safety Instrumented System Certification as per IEC 61508 standard, SIL 2 and above.	Yes / No / Explain		
12	Zero & Span Adjustments	Zero and Span are to be adjusted from the Handheld HART Communicator and provision for local adjustment to be set anywhere within the range limits.	Yes / No / Explain		
13	Failure mode alarms	High alarm ≥ 21.0 mA, Low Alarm ≤ 3.6 mA	Yes / No / Explain		
14	Accuracy @ TD 8:1	$\leq \pm 0.09$ % of Calibrated span (including the effect of Terminal - Based linearity, hysteresis & repeatability)	Yes / No / Explain		
15	Ambient Temperature Effect for 28°C variation @ TD 8:1	$\leq \pm 0.4$ % of span	Yes / No / Explain		
16	Stability	$\leq \pm 0.2$ % of URL for 10 years	Yes / No / Explain		
17	Power Supply Effect	$\leq \pm 0.005$ % of Calibrated Span per Volt.	Yes / No / Explain		
18	Nominal Operating Temperature	-20 – 70°C	Yes / No / Explain		
19	Total Response time	≤ 150 millisecond	Yes / No / Explain		

20	Wetted Material	As per Table-3 in Annexure-A	Yes / No / Explain		
21	Fill Fluid	As per Table-3 in Annexure-A	Yes / No / Explain		
22	Transient/Lightening Protection	To be provided	Yes / No / Explain		
23	Electrical Connection	½ " – 14 NPT (F) with SS plug for dust proof.	Yes / No / Explain		
24	Transmitter Process connection	½ " – 14 NPT (F) or suitable for the quoted manifold	Yes / No / Explain		
25	Housing Material	Polyurethane covered aluminum with ½" - 14 NPT conduit entry.	Yes / No / Explain		
26	External Grounding screw assembly on transmitter body	Required	Yes / No / Explain		
27	Mounting Bracket	Stainless Steel Bracket with SS fasteners, bolts, nuts, washers and U- clamps suitable for 2 inch pipe mounting.	Yes / No / Explain		
28	Calibration	Calibration shall be carried out at room temperature in 5 steps ascending and 5 steps descending. Calibration certificate is to be provided. Calibration shall be traceable to National Standards.	Yes / No / Explain		
29	Manifold	2-way valve manifold to be integrated with transmitter and supplied.	Yes / No / Explain		
30	Specification of Manifold		-		
31	manifold Type	2 valve manifold	Yes / No / Explain		
32	Material	316SS	Yes / No / Explain		
33	Packing material	PTFE	Yes / No / Explain		
34	Seat type	Integral	Yes / No / Explain		

35	Instrument Connection	Suitable for quoted transmitter interface	Yes / No / Explain		
36	Process connection	½ inch-14 NPTF	Yes / No / Explain		
37	Maximum Operating Pressure	400 bar manifold for transmitter range upto 250 bar, 680 bar manifold for transmitter range between 250 to 500 bar	Yes / No / Explain		
38	Operating Temperature	0 to 100 Deg C	Yes / No / Explain		
39	Hydro Testing	To be carried out at 1.5 times the maximum operating pressure for all the manifolds and certificate to be provided	Yes / No / Explain		
40	Material Test certificate	To be provided	Yes / No / Explain		
41	Mounting Bolts	To be supplied with SS material.	Yes / No / Explain		

Document : Specification of AP Tx with manifold

6. Absolute Pressure Transmitter (SMART) (Medium: GH2; Range above 200bar)

Item specifications for Absolute Pressure Transmitter (SMART)

SI No	Specification	Value	Compliance	Offered Specification	Remark
1	Specification of SMART Absolute or Gauge Pressure Transmitter:		-		
2	Parameters	Specification	Yes / No / Explain		
3	Type	SMART Absolute or Gauge Pressure Transmitter	Yes / No / Explain		
4	Measurement Range	As per Table-1 in Annexure-A	Yes / No / Explain		
5	Service Medium	GH2	Yes / No / Explain		
6	Maximum Turndown Ratio (TD)	100:1	Yes / No / Explain		

7	Output	Two wire 4–20 mA with superimposed Digital communication HART protocol.	Yes / No / Explain		
8	Power Supply	12 to 30 V DC.	Yes / No / Explain		
9	Local Indication	min 4½ digits LCD – Local Alpha Numeric Digital display in Engineering units.	Yes / No / Explain		
10	Hazardous Area Certification	Both Intrinsically safe and Explosion proof suitable for use in Hydrogen atmosphere. (CENLEC / CSA / FM / ATEX or any equivalent approval).	Yes / No / Explain		
11	Safety Integrity Level Standard (SIL)	Safety Instrumented System Certification as per IEC 61508 standard, SIL 2 and above.	Yes / No / Explain		
12	Zero & Span Adjustments	Zero and Span are to be adjusted from the Handheld HART Communicator and provision for local adjustment to be set anywhere within the range limits.	Yes / No / Explain		
13	Failure mode alarms	High alarm ≥ 21.0 mA, Low Alarm ≤ 3.6 mA	Yes / No / Explain		
14	Accuracy @ TD 2.5:1	$\leq \pm 0.09$ % of Calibrated span (including the effect of Terminal - Based linearity, hysteresis & repeatability)	Yes / No / Explain		
15	Ambient Temperature Effect for 28°C variation @ TD 2.5:1	$\leq \pm 0.4$ % of span	Yes / No / Explain		
16	Stability	$\leq \pm 0.2$ % of URL for 10 years	Yes / No / Explain		
17	Power Supply Effect	$\leq \pm 0.005$ % of Calibrated Span per Volt.	Yes / No / Explain		
18	Nominal Operating Temperature	-20 – 70°C	Yes / No / Explain		
19	Total Response time	≤ 150 millisecond	Yes / No / Explain		

20	Wetted Material	As per Table-3 in Annexure-A	Yes / No / Explain		
21	Fill Fluid	As per Table-3 in Annexure-A	Yes / No / Explain		
22	Transient/Lightening Protection	To be provided	Yes / No / Explain		
23	Electrical Connection	½ " – 14 NPT (F) with SS plug for dust proof.	Yes / No / Explain		
24	Transmitter Process connection	½ " – 14 NPT (F) or suitable for the quoted manifold	Yes / No / Explain		
25	Housing Material	Polyurethane covered aluminum with ½- 14 NPT conduit entry.	Yes / No / Explain		
26	External Grounding screw assembly on transmitter body	Required	Yes / No / Explain		
27	Mounting Bracket	Stainless Steel Bracket with SS fasteners, bolts, nuts, washers and U- clamps suitable for 2 inch pipe mounting.	Yes / No / Explain		
28	Calibration	Calibration shall be carried out at room temperature in 5 steps ascending and 5 steps descending. Calibration certificate is to be provided. Calibration shall be traceable to National Standards.	Yes / No / Explain		
29	Manifold	2-way valve manifold to be integrated with transmitter and supplied.	Yes / No / Explain		
30	Specification of Manifold		-		
31	manifold Type	2 valve manifold	Yes / No / Explain		
32	Material	316SS	Yes / No / Explain		
33	Packing material	PTFE	Yes / No / Explain		
34	Seat type	Integral	Yes / No / Explain		

35	Instrument Connection	Suitable for quoted transmitter interface	Yes / No / Explain		
36	Process connection	½ inch-14 NPTF	Yes / No / Explain		
37	Maximum Operating Pressure	400 bar manifold for transmitter range upto 250 bar, 680 bar manifold for transmitter range between 250 to 500 bar	Yes / No / Explain		
38	Operating Temperature	0 to 100 Deg C	Yes / No / Explain		
39	Hydro Testing	To be carried out at 1.5 times the maximum operating pressure for all the manifolds and certificate to be provided	Yes / No / Explain		
40	Material Test certificate	To be provided	Yes / No / Explain		
41	Mounting Bolts	To be supplied with SS material.	Yes / No / Explain		

Document : Specification of AP Tx with manifold

7. Differential Pressure Transmitter (SMART) (Medium : Ethanol, Isrosene & water; Range up to 2000mbar)

Item specifications for Differential Pressure Transmitter (SMART)

SI No	Specification	Value	Compliance	Offered Specification	Remark
1	Specification of SMART Differential Pressure Transmitter:		-		
2	Parameters	Specification	Yes / No / Explain		
3	Type	SMART Differential Pressure Transmitter	Yes / No / Explain		
4	Measurement Range	As per Table-2 in Annexure-A	Yes / No / Explain		
5	Service medium	As per Table-2 in Annexure-A	Yes / No / Explain		

6	Maximum Turndown(TD) Ratio	100:1	Yes / No / Explain		
7	Output	Two wire 4–20 mA with superimposed Digital communication HART protocol.	Yes / No / Explain		
8	Power Supply	12 to 30 V DC.	Yes / No / Explain		
9	Local Indication	Min 4 ½ digit LCD-Local Alpha Numeric Digital display in Engineering unit.	Yes / No / Explain		
10	Hazardous Area Certification for all Transmitters	Both Intrinsically safe and Explosion proof suitable for use in Hydrogen atmosphere.(CENEL EC / CSA / FM / ATEX or any equivalent approval).	Yes / No / Explain		
11	Safety Integrity Level Standard (SIL)	Safety Instrumented System Certification as per IEC 61508 standard, SIL 2 and above.	Yes / No / Explain		
12	Zero & Span Adjustments	Zero and Span are to be adjusted from the Handheld HART Communicator (HHC) and provision for local adjustment to be set anywhere within the range limits.	Yes / No / Explain		
13	Failure mode alarms	High alarm ≥ 21.0 mA, Low Alarm ≤ 3.6 mA	Yes / No / Explain		
14	Reference Accuracy @ TD 5:1	$\leq \pm 0.075\%$ Span for URL above 100 mbar, $\leq \pm 0.1\%$ Span for URL below 100 mbar (including the effect of Terminal - based linearity, hysteresis & repeatability).	Yes / No / Explain		
15	Ambient Temperature effect for 28 °C variation @ TD 5:1	$\leq \pm 0.4\%$ Span for URL above 100 mbar, $\leq \pm 0.75\%$ Span for URL below 100 mbar	Yes / No / Explain		
16	Stability	$\leq \pm 0.2\%$ URL for 5 years , for URL above 100 mBar, $\leq \pm 0.2\%$ URL for 1 years , for URL below 100 mBar	Yes / No / Explain		

17	Power Supply Effect	$\leq \pm 0.005$ % of Calibrated Span per volt.	Yes / No / Explain		
18	Mounting Position Effect	Zero shifts can be calibrated out.	Yes / No / Explain		
19	Static Pressure effect	Span error: $\leq \pm 0.2$ % of span /70 bar for URL above 100 mbar. Span error: $\leq \pm 0.45$ % of span /70 bar for URL below 100 mbar.	Yes / No / Explain		
20	Maximum Static pressure	As per Table-2 in Annexure-A	Yes / No / Explain		
21	Nominal Operating Temperature	-20 – 70°C	Yes / No / Explain		
22	Total Response time	≤ 300 msec	Yes / No / Explain		
23	Wetted Material	As per Table-3 in Annexure-A	Yes / No / Explain		
24	Fill Fluid	As per Table-3 in Annexure-A	Yes / No / Explain		
25	Transient / Lightning Protection	To be provided	Yes / No / Explain		
26	Electrical Connection	$\frac{1}{2}$ " – 14 NPT (F) with SS plug for dust proof.	Yes / No / Explain		
27	Transmitter Process Connection	$\frac{1}{2}$ " – 14 NPT (F) or suitable for the quoted manifold	Yes / No / Explain		
28	Housing Material	Polyurethane covered aluminum with $\frac{1}{2}$ "-14 NPT Conduit entry.	Yes / No / Explain		
29	External Grounding screw assembly on transmitter body	Required.	Yes / No / Explain		
30	Mounting Bracket	Stainless Steel Bracket with SS fasteners, bolts, nuts, washers and U-clamps suitable for 2 inch pipe mounting.	Yes / No / Explain		

31	Calibration	Calibration shall be carried out at room temperature in 5 steps ascending and 5 steps descending. Calibration certificate is to be provided. Calibration shall be traceable to National Standards.	Yes / No / Explain		
32	Manifold	5-way valve manifold to be integrated with transmitter and supplied.	Yes / No / Explain		
33	Specification of Manifold		-		
34	Manifold Type	5 valve manifold	Yes / No / Explain		
35	Material	316SS	Yes / No / Explain		
36	Packing material	PTFE	Yes / No / Explain		
37	Seat type	Integral	Yes / No / Explain		
38	Instrument Connection	Suitable for quoted transmitter interface	Yes / No / Explain		
39	Process connection	½ inch-14 NPTF	Yes / No / Explain		
40	Maximum Operating Pressure	400 bar manifold for transmitter static pressure range upto 250 bar, 680 bar manifold for transmitter static pressure range between 250 to 500 bar	Yes / No / Explain		
41	Operating Temperature	0 to 100 Deg C	Yes / No / Explain		
42	Hydro Testing	To be carried out at 1.5 times the maximum operating pressure for all the manifolds and certificate to be provided	Yes / No / Explain		
43	Material Test certificate	To be provided	Yes / No / Explain		
44	Mounting Bolts	To be supplied with SS material.	Yes / No / Explain		

8. Differential Pressure Transmitter (SMART) (Medium : GO2; Range 4000mbar)

Item specifications for Differential Pressure Transmitter (SMART)

SI No	Specification	Value	Compliance	Offered Specification	Remark
1	Specification of SMART Differential Pressure Transmitter:		-		
2	Parameters	Specification	Yes / No / Explain		
3	Type	SMART Differential Pressure Transmitter	Yes / No / Explain		
4	Measurement Range	As per Table-2 in Annexure-A	Yes / No / Explain		
5	Service medium	GO2	Yes / No / Explain		
6	Maximum Turndown(TD) Ratio	100:1	Yes / No / Explain		
7	Output	Two wire 4–20 mA with superimposed Digital communication HART protocol.	Yes / No / Explain		
8	Power Supply	12 to 30 V DC.	Yes / No / Explain		
9	Local Indication	Min 4 ½ digit LCD-Local Alpha Numeric Digital display in Engineering unit.	Yes / No / Explain		
10	Hazardous Area Certification for all Transmitters	Both Intrinsically safe and Explosion proof suitable for use in Hydrogen atmosphere.(CENEL EC / CSA / FM / ATEX or any equivalent approval).	Yes / No / Explain		
11	Safety Integrity Level Standard (SIL)	Safety Instrumented System Certification as per IEC 61508 standard, SIL 2 and above.	Yes / No / Explain		

12	Zero & Span Adjustments	Zero and Span are to be adjusted from the Handheld HART Communicator (HHC) and provision for local adjustment to be set anywhere within the range limits.	Yes / No / Explain		
13	Failure mode alarms	High alarm ≥ 21.0 mA, Low Alarm ≤ 3.6 mA	Yes / No / Explain		
14	Reference Accuracy @ TD 5:1	$\leq \pm 0.075\%$ Span for URL above 100 mbar, $\leq \pm 0.1\%$ Span for URL below 100 mbar (including the effect of Terminal - based linearity, hysteresis & repeatability).	Yes / No / Explain		
15	Ambient Temperature effect for 28 °C variation @ TD 5:1	$\leq \pm 0.4\%$ Span for URL above 100 mbar, $\leq \pm 0.75\%$ Span for URL below 100 mbar	Yes / No / Explain		
16	Stability	$\leq \pm 0.2\%$ URL for 5 years , for URL above 100 mBar, $\leq \pm 0.2\%$ URL for 1 years , for URL below 100 mBar	Yes / No / Explain		
17	Power Supply Effect	$\leq \pm 0.005\%$ of Calibrated Span per volt.	Yes / No / Explain		
18	Mounting Position Effect	Zero shifts can be calibrated out.	Yes / No / Explain		
19	Static Pressure effect	Span error: $\leq \pm 0.2\%$ of span /70 bar for URL above 100 mbar. Span error: $\leq \pm 0.45\%$ of span /70 bar for URL below 100 mbar.	Yes / No / Explain		
20	Maximum Static pressure	As per Table-2 in Annexure-A	Yes / No / Explain		
21	Nominal Operating Temperature	-20 – 70 °C	Yes / No / Explain		
22	Total Response time	≤ 300 msec	Yes / No / Explain		
23	Wetted Material	As per Table-3 in Annexure-A	Yes / No / Explain		

24	Fill Fluid	As per Table-3 in Annexure-A	Yes / No / Explain		
25	Transient / Lightning Protection	To be provided	Yes / No / Explain		
26	Electrical Connection	½ " – 14 NPT (F) with SS plug for dust proof.	Yes / No / Explain		
27	Transmitter Process Connection	½ " – 14 NPT (F) or suitable for the quoted manifold	Yes / No / Explain		
28	Housing Material	Polyurethane covered aluminum with 1/2"-14 NPT Conduit entry.	Yes / No / Explain		
29	External Grounding screw assembly on transmitter body	Required.	Yes / No / Explain		
30	Mounting Bracket	Stainless Steel Bracket with SS fasteners, bolts, nuts, washers and U-clamps suitable for 2 inch pipe mounting.	Yes / No / Explain		
31	Calibration	Calibration shall be carried out at room temperature in 5 steps ascending and 5 steps descending. Calibration certificate is to be provided. Calibration shall be traceable to National Standards.	Yes / No / Explain		
32	Manifold	5-way valve manifold to be integrated with transmitter and supplied.	Yes / No / Explain		
33	Specification of Manifold		-		
34	Manifold Type	5 valve manifold	Yes / No / Explain		
35	Material	316SS	Yes / No / Explain		
36	Packing material	PTFE	Yes / No / Explain		
37	Seat type	Integral	Yes / No / Explain		
38	Instrument Connection	Suitable for quoted transmitter interface	Yes / No / Explain		

39	Process connection	½ inch-14 NPTF	Yes / No / Explain		
40	Maximum Operating Pressure	400 bar manifold for transmitter static pressure range upto 250 bar, 680 bar manifold for transmitter static pressure range between 250 to 500 bar	Yes / No / Explain		
41	Operating Temperature	0 to 100 Deg C	Yes / No / Explain		
42	Hydro Testing	To be carried out at 1.5 times the maximum operating pressure for all the manifolds and certificate to be provided	Yes / No / Explain		
43	Material Test certificate	To be provided	Yes / No / Explain		
44	Mounting Bolts	To be supplied with SS material.	Yes / No / Explain		
45	Oxygen cleaning	Oxygen cleaning to be carried out for transmitters operating medium is oxygen	Yes / No / Explain		

Document : Specification of DP Tx with manifold

Common Specifications (Applicable for all items)

SI No	Specification	Value	Compliance	Offered Specification	Remark
1	General conditions:		-		
2	1. The offer shall be in two part.		-		
3	2. The quotation shall have technical details separately. Technical details shall not be clubbed with commercial details. If so the offer will get rejected.		-		

4	3. Party shall quote with detailed technical specification and printed product catalogue, manufacturer datasheet containing product matrix and Part No de-codification details.		-		
5	4. Items shall be delivered within 24 weeks from the date of issue of P.O.		-		
6	5. Party shall quote the models such that the max URL of the particular model meets the following requirement:		-		
7	a. For Absolute Transmitter max URL should be <8 times the measurement range.		-		
8	b. For Differential Transmitter max URL should be <5 times the measurement range.		-		
9	6. Technical compliance statement to our indented specification shall be provided.		-		
10	7. Operation Manual in English to be supplied.		-		

11	8. Party shall submit a detailed drawing of transmitters indicating the cross sectional details and dimensions.		-		
12	9. The inspection of transmitters shall be done by QC division of vendor. Scope of inspection shall be as per Quality Assurance Plan (QAP).		-		
13	10. The cost of the valve manifold need to be quoted along with pressure transmitter.		-		
14	11. The commercial terms such as packing and forwarding (P&F), freight and GST to be quoted separately.		-		
15	12. All transmitters should have been calibrated within 6 months prior to date of dispatch.		-		
16	13. After PO release, the test certificates, applicable standards, calibration charts shall be submitted to department before dispatch the items to obtain 'Dispatch Clearance'.		-		

17	14. Guarantee: The transmitters shall be guaranteed for satisfactory performance over a period of 18 months from the date of dispatch from the Supplier's works.		-		
18	Pre-qualification criteria		-		
19	15. The Bidder's capability shall be evaluated based on the following Pre-Qualification (PQ) criteria. The Bidders shall suitably fill-up the information solicited in "Item Specification" and submit as part of the Techno-Commercial Bid (TCB). Those Bidders who comply with the PQ criteria only will be screened-in for opening and evaluation of Price Bid.		-		

20	16. The information to be submitted in the TCB shall be complete in all respects substantiated by valid documents and there shall not be any further opportunity for the Bidders to submit any information or document unless the Department solicits so at their own discretion.		-		
21	17. Any lack of information or incomplete/ambiguous information or false information or information non-compliant with the PQ criteria shall be treated as sufficient cause to summarily reject such Bids.		-		

22	<p>18. The original equipment manufacturers of the system, or their Indian Subsidiary/authorized dealers/ system integrators are alone eligible to participate in the tender. For the same, Dealers/System integrators must attach an authorization letter from OEM of the system specific to this product.</p>				
23	<p>19. The Bidder must have successfully supplied the similar type of SMART Pressure Transmitters with Hazardous area certification (from CENLEC / CSA / FM / ATEX or any equivalent approval) for Ex IIC T6 application to aerospace testing or manufacturing facility. The claim shall be substantiated by Purchase Order(s) and inspection release note(s)/ acceptance certificate(s) by third-party inspection agency or client dated between 2017 to 2024.</p>				

Supporting Documents required from Vendor

- 1. Detailed make & model matrix of the item and detailed product catalogue.**
- 2. Copy of your Quotation in PDF format with detailed Terms & Conditions, WITHOUT PRICE DETAILS/MASKING ALL PRICE DETAILS TO KNOW THE PATTERN OF QUOTE. ENSURE NOT TO MENTION ANY PRICE IN THIS DOCUMENTS, OTHERWISE THE QUOTE WILL BE INVALID.**
- 3. Detailed make & model matrix of the items as per the Range & medium mentioned in Annexure-A [DO NOT MENTION YOUR QUOTED PRICE IN THIS DOCUMENT]**
- 4. Local Content Declaration as per the provided format in bid documents. Declaration in any other format will not be acceptable]. DO NOT DISCLOSE YOUR QUOTED PRICE IN THESE DOCUMENTS**
- 5. Declaration with respect to Land Border sharing as per the format given in the tender document [Do not mention your quoted price in these documents]**
- 6. MSME UDYAM Registration certificate, if applicable**
- 7. Any other documents[Pls Do not disclose price in these documents]**

5 additional documents can be uploaded by the vendor

C.2 Commercial Terms / Bid

Sl. No.	Description	Compliance	Vendor Terms
1	<p>IMPORTANT NOTE: This is a Two-Part tender i.e. Techno-Commercial Part Containing C.1 (Technical Bid), Supporting Documents required from Vendor, C.2 (Commercial Terms / Bid) and C3. Price Bid . Please note that all technical commercial details without price shall be furnished in the Documents Solicited from Vendor & in Commercial Compliance C.2 (Commercial Terms / Bid) Fields while price shall be indicated only in the C3. Price Bid form of bid submission in E-procurement portal. PRICE SHALL BE MENTIONED ONLY IN THE E-PROCUREMENT PRICE BID FORM. [ENSURE NOT TO MENTION ANY PRICE ANYWHERE ELSE, OTHERWISE THE QUOTE WILL BE INVALID. PLEASE NOTE BEFORE/WHILE SUBMITTING YOUR OFFERS. Note and Confirm.</p>	Yes / No / Explain	
2	<p>Foreign vendors & Non Local suppliers are not permitted to quote. Only Class-I and Class-II Local suppliers as per Make in India Policy are eligible to participate in the bid. Ensure to Upload Local Content Declaration as per the attached format given in this tender document. Without Local Content declaration your offer will not be considered for evaluation. Note and Confirm.</p>	Yes / No / Explain	
3	<p>Taxes and other costs (Specify). We are eligible for GST @5% as per relevant notification of IGST/CGST/SGST [IGST@5%:- Notification No. 7/2018 - Integrated Tax (Rate) dated 25.01.2018 & its amendment and CGST @2.5% vide Notification No: 6/2018 - Central Tax (Rate) dated 25.01.2018 & its amendments and SGST@2.5% as per Government of Tamil Nadu, Commercial Taxes & Registration (B1) Department G.O(Ms) No.18 Dtd. 25/01/2018 & its amendments]. Necessary concessional GST certificate will be provided along with the P.O. Please note and quote accordingly.</p>	Yes / No / Explain	

4	<p>Security Deposit (Applicable Only if Offer Value is Rs. 5 Lakhs or above. MSME/NSIC Units are NOT EXEMPTED from the payment of SD. SD@ 3% of Order Value valid till 60 days from the date of supply to be submitted. It can submitted in the form of Bank Guarantee on Rs.200/ Stamp paper/account payee demand draft/ fixed deposit receipt from a commercial bank/bank guarantee issued and confirmed from any of the commercial bank in India. Mandatory compliance required for SD Clause. Only Government Bodies/PSUs/PSEs can submit Indemnity Bond in lieu of BG. In case of non-execution of the Purchase Order within the stipulated delivery period, IPRC reserves the right to cancel the Purchase Order and forfeit the Security Deposit. However, based on request from the Vendor, in case IPRC agree to extend the delivery period with applicability of Liquidated Damages or otherwise, the validity of the Bank Guarantee should be suitably extended. It may be noted that adjustment of Security Deposit from the progressive payment/final bill is not permitted. Note and Confirm.</p>	Yes / No / Explain	
5	<p>Delivery Terms: Normal delivery terms - FOR Destination (i.e., IPRC, Mahendragiri), Note and Confirm.</p>	Yes / No / Explain	
6	<p>Delivery Period:-</p>	Yes / No / Explain	
7	<p>Liquidated Damages (Applicable beyond the delivery period mentioned in the order @ 0.5% per week subject to a maximum of 10% of the contract value. Mandatory compliance required). Note and Confirm.</p>	Yes / No / Explain	
8	<p>Guarantee Period :-</p>	Yes / No / Explain	

9	<p>Performance Bank Guarantee (PBG):- PBG @ 3% of Order Value valid till the completion of warranty period plus 2 months claim period to be submitted. Mandatory compliance required. It can submitted in the form of Bank Guarantee in Rs. 200/- stamp paper/account payee demand draft/ fixed deposit receipt from a commercial bank/bank guarantee issued and confirmed from any of the commercial bank in India. In case the warranty period is extended due to any reasons, the validity of the Bank Guarantee shall also be extended suitably. Only Government Bodies/PSUs/PSEs can submit Indemnity Bond in lieu of BG. In the event of non-performance of warranty obligations, PBG will be forfeited). It may be noted that adjustment of PBG from the progressive payment/final bill is not permitted. Note and Confirm.</p>	Yes / No / Explain	
10	<p>Combined BG towards SD & PBG:- You have an option to submit a combined Bank Guarantee for Security Deposit and Performance Bank Guarantee within 15 days from the date of receipt of Purchase Order and valid for 60 days beyond completion of the warranty period/all contractual obligation. In case PBG is submitted by way FDR (lien marked to Accounts Officer, IPRC or Demand Draft (in favor of Accounts Officer, IPRC). Note and Confirm.</p>	Yes / No / Explain	
11	<p>Payment Terms: 100% within 30 days after receipt and acceptance of item at our site. (No advance payment is acceptable). Note and Confirm.</p>	Yes / No / Explain	
12	<p>Class-I local suppliers can avail purchase preference as per Make In India OM of DPIIT, if their offer falls within the margin of Purchase Preference with respect to the lowest bid. Note and Confirm.</p>	Yes / No / Explain	
13	<p>Definitions as per make In India policy of Govt. of India: A supplier or service provider, whose goods, services or works offered for procurement, has local content: a)Equal to or more than 50% : Class-I local supplier. b)More than 20% but less than 50% : Class-II local supplier. c)Less than or equal to 20% : Non-local supplier. Mention your category.</p>	Yes / No / Explain	

14	<p>The Class-I & II local supplier should provide a Self Certification along with your offer in PDF format indicating that the item offered meets the minimum local content as called for in the tender as mentioned above and provide the % of local content along with details of the location(s) at which the local value addition is made. In case of two part tenders, it is mandatory to indicate compliance to MLC(minimum local content) in technical bid itself. Confirm attachment of Self declaration along with the offer.</p>	Yes / No / Explain	
15	<p>Local content means the amount of value added in India (i.e. indigenous items/services added in the offered products/services/works) be the total value of the item offered (excluding net domestic indirect taxes) minus the value of imported content in the item (including all customs duties/IGST) as a proportion of the total value (excluding net domestic indirect taxes), in percent. Indicate extent of Minimum Local Content in offered product/service and location of such value additions. [Please note that as per DPIITs OM Ref P-45021/102/2019-BE-II-Paart(1)(E-50310) Dtd. 04/03/2021 you cannot claim as Class-I local suppliers/Class-II local suppliers by claiming the services such as transportation, insurance, installation, commissioning, training and after sales service support like AMC/CMC etc. as local value addition]. Confirm that your declared Local content is in line with these guidelines.</p>	Yes / No / Explain	
16	Country of origin of the offered product/s	Yes / No / Explain	

17	Declaration:-"I have read the clause regarding restrictions on procurement from a bidder of a country which shares a land border with India; I certify that this bidder is not from such a country or, if from such a country, has been registered with the Competent Authority. I hereby certify that this bidder fulfills all requirements in this regard and is eligible to be considered. [Where applicable, evidence of valid registration by the Competent Authority shall be attached.]" Important Note:- It is certified that the products proposed for supply in our offer are NOT procured directly/indirectly from the vendors from the countries that share a land border with India. If the supply is from such a vendor the required registration certificate will be provided [as per Rule 144 (xi) of GFR, 2017]. Note and Confirm.	Yes / No / Explain	
18	Offer Validity.[After opening of Part-120 Days, After opening of Part-II-60 Days]. Confirm.	Yes / No / Explain	
19	Confirm MSME or not. If applicable provide UDYAM REGISTRATION certificate along with the offer.	Yes / No / Explain	
20	PO Ordering Address with Name and Contact Details of Sales Person concerned (e-mail and phone number)	Yes / No / Explain	
21	GeM (https://gem.gov.in) Seller Registration: If Registered in GeM portal, Please provide your GeM Seller unique ID.	Yes / No / Explain	
22	Please mention your Bank details such as IFSC code, Account Number & also upload a copy of cancelled cheque leaf or NEFT/ECS mandate form duly endorsed by the bank along with your quotation.	Yes / No / Explain	
23	Any other terms	Yes / No / Explain	

C.3 Price Bid

Sl. No.	Item	Quantity	Unit Price	Currency	Total Price	Discount	Remark
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1	Absolute Pressure Transmitter (SMART) (Medium: GN2, Air, DM water & Water; Range up to 200bar)	33.00 Nos.		-			
2	Absolute Pressure Transmitter (SMART)(Medium: GN2, Air, DM water & Water; Range above 200bar)	7.00 Nos.		-			
3	Absolute Pressure Transmitter (SMART) (Medium: GO2; Range up to 200bar)	2.00 Nos.		-			
4	Absolute Pressure Transmitter (SMART) (Medium: GO2; Range above 200bar)	2.00 Nos.		-			
5	Absolute Pressure Transmitter (SMART) (Medium: GH2; Range up to 200bar)	1.00 Nos.		-			
6	Absolute Pressure Transmitter (SMART) (Medium: GH2; Range above 200bar)	5.00 Nos.		-			

7	Differential Pressure Transmitter (SMART) (Medium : Ethanol, Isrosene & water; Range up to 2000mbar)	4.00 Nos.		-			
8	Differential Pressure Transmitter (SMART) (Medium : GO2; Range 4000mbar)	1.00 Nos.		-			

Common charges (Applicable for all items)

P & F (price)	
Documentation and Handling charges, if applicable	
freight (price)	
Other charges,if any[specify detail in your quote]	